ADDRESS CALCULATION OF INVARIANT REFERENCES WITHIN A RUN-TIME ENVIRONMENT

ABSTRACT OF THE DISCLOSURE

Efficient address calculation of invariant reference within a run-time environment is attained by a self-relative numeric reference format for run-time storage of references. A self-relative numeric reference format specifies the location of a reference object relative to a pointer to the referencing object as an integer value. The machine pointers and numeric references may be tagged, and a tag assignment is disclosed so that a self-relative numeric reference is generated from machine pointers by calculating a pointer difference, and a machine pointer to the referenced object is generated by adding the self-relative numeric reference to a machine pointer to the referencing object.